AMENDMENTS TO THE CLAIMS

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of the claims in the application.

1. (Currently Amended) A system for computer aided surgery navigation which includes a sensor adapted to sense position of a plurality of indicia attached by a reference frame to an item used in surgery and a computer functionality adapted to receive information from the sensor about position of the indicia and generate information corresponding to position and orientation of the item to which the indicia are attached wherein:

~~wherein the indicia are attached to the item using at least one registering and securing mechanism such that the indicia may attach only in a determined position and so that the indicia may be removed from the item and reattached without incorrect registration relative to the item; and wherein the registering and securing mechanism features a structure which allows the indicia to be selectively attached and detached from the item.~~

the reference frame comprises a receiving slot formed integral with the reference frame, the receiving slot defined by a side wall extending along three sides of the receiving slot to define a receiving opening configured to receive a mating portion attached to the item used in surgery, the receiving

slot thus having a bottom portion formed by the reference frame, three side portions formed by the side wall, a receiving opening within the side wall, and an open top portion opposite of the bottom portion and in addition to the receiving opening on the side wall, such that all surfaces within the receiving slot are exposed, and the bottom of the receiving slot further comprising a key-hole;

the system further including a registering and securing mechanism attached to the item, comprising a mating portion configured to engage the receiving slot of the reference frame through the receiving opening and further configured such that the registering and securing mechanism may move within the receiving slot only along a single translational degree of freedom and further comprising a locking member configured to engage the key-hole and securely fix the mating portion within the receiving slot along the single translational degree of freedom;

wherein the indicia may only attach in a determined position so that they may be removed from the item and reattached without incorrect registration of the indicia relative to the item; and

wherein the registering and securing mechanism includes a structure which allows the indicia to be selectively attached and detached from the item.

2. (Previously Amended) A system according to claim 1 wherein at least one of the indicia includes a reflective surface adapted to be sensed by an infrared sensor device or a transponder that emits energy when interrogated.

3. (Cancelled)

4. (Previously Amended) A system accordingly to claim 1 in which the registering and securing mechanism comprises at least one of a ball plunger, a retractable plunger, a male pin and female receptor, or a magnetic device.

5. (Currently Amended) A device for use in a computer aided surgical navigation system including a sensor adapted to sense position of a plurality of indicia attached by a reference frame to an item used in surgery, and computer functionality adapted to receive information from the sensor about position of the indicia and generate information corresponding to position and orientation of the item to which the indicia are ~~attachedcomprising~~ attached comprising:

a reference frame to which the indicia may be attached, the reference frame adapted to be connected to the item and comprising a receiving slot formed integral with the reference frame, the receiving slot formed by a side wall extending along three sides of the receiving slot to define a receiving opening configured to receive a mating portion attached to the item used in surgery, the receiving slot thus having a bottom portion formed by the reference frame, 3 side portions formed by the side wall, a receiving opening within the side wall, and an open top portion opposite of the bottom portion and in addition to

the receiving opening on the side wall, such that all surfaces within the receiving slot are exposed, and the bottom of the receiving slot further comprising a key-hole;

a registering and securing mechanism ~~interposed between at least one indicium and~~ attached to the item, comprising a mating portion configured to engage the receiving slot of the reference frame through the receiving opening and further configured such that the registering and securing mechanism may move within the receiving slot only along a single translational degree of freedom and further comprising a locking member configured to engage the key-hole and securely fix the mating portion within the receiving slot along the single translational degree of freedom;

wherein the indicia may only attach in a determined position so that they may be removed from the item and reattached without incorrect registration of the indicia relative to the item; and

wherein the registering and securing mechanism includes a structure which allows the indicia to be selectively attached and detached from the item.

6. (Previously Amended) A device according to claim 5 wherein at least one of the indicia includes a reflective surface adapted to be sensed by an infrared sensor device or a transponder that emits energy when interrogated.

7. (Cancelled)

8. (Previously Amended) A device according to claim 5 in which the registering and securing mechanism comprises at least one of a ball plunger, a retractable plunger, a male pin and female receptor, or a magnetic device.

9. (Currently Amended) A process for conducting a computer aided surgery including providing a computer aided surgery system including a sensor adapted to sense position of a plurality of indicia attached by a reference frame to an item used in surgery and computer functionality adapted to receive information from the sensor about position of the indicia and generate information corresponding to position and orientation of the item to which the indicia are attached, comprising:

~~wherein at least one of the indicia is attached to the item using a registering and securing mechanism such that the indicium may only attach in a determined position so that it may be removed from the item and reattached without incorrect registration of the indicium relative to the item;~~

~~wherein the registering and securing mechanism features structure which allows the indicium to be selectively attached and detached from the item;~~

~~wherein the indicia are registered into the system;~~

providing a reference frame to which the indicia may be attached, the reference frame adapted to be connected to the item and comprising a receiving slot formed integral with the reference frame, the receiving slot formed by a side wall extending along three sides of the receiving slot to define a receiving opening configured to receive a mating portion attached to

the item used in surgery, the receiving slot thus having a bottom portion formed by the reference frame, three side portions formed by the side wall, a receiving opening within the side wall, and an open top portion opposite of the bottom portion and in addition to the receiving opening on the side wall, such that all surfaces within the receiving slot are exposed, and the bottom of the receiving slot further comprising a key-hole;

a registering and securing mechanism attached to the item, comprising a mating portion configured to engage the receiving slot of the reference frame through the receiving opening and further configured such that the registering and securing mechanism may move within the receiving slot only along a single translational degree of freedom and further comprising a locking member configured to engage the key-hole and securely fix the mating portion within the receiving slot along the single translational degree of freedom;

wherein the indicia may only attach in a determined position so that they may be removed from the item and reattached without incorrect registration of the indicia relative to the item; and wherein the registering and securing mechanism includes a structure which allows the indicia to be selectively attached and detached from the item; and

wherein the item is navigated during surgery using the image rendered by the rendering functionality;

wherein at least one indicium is detached from the item;

wherein the indicium is repositioned into correct position and orientation relative to the item; and

wherein the item continues to be navigated during surgery without the need to reregister the indicium into the system.

10. (Cancelled)

11. (Cancelled)

12. (Currently Amended) A system according to claim ~~10~~ 17 in which the adjustable securing mechanism includes an adjustable rod with a base thumb screw for securing the adjustable rod.

13. (Cancelled)

14. (Cancelled)

15. (Currently Amended) A device according to claim ~~13~~ 18 in which the adjustable securing mechanism includes an adjustable rod with a base thumb screw for securing the adjustable rod.

16. (Cancelled)

17. (New) The system of claim 1, wherein an adjustable securing mechanism is interposed between the registering and securing mechanism and the item, the adjustable securing mechanism including structure which allows the registering and securing mechanism to be selectively repositioned relative to the item along three rotational degrees of freedom.

18. (New) The device of claim 5, wherein an adjustable securing mechanism is interposed between the registering and securing mechanism and the item, the adjustable securing mechanism including structure which allows the registering and securing mechanism to be selectively repositioned relative to the item along three rotational degrees of freedom.

19. (New) The process of claim 9, wherein an adjustable securing mechanism is interposed between the registering and securing mechanism and the item, the adjustable securing mechanism including structure which allows the registering and securing mechanism to be selectively repositioned relative to the item along three rotational degrees of freedom.